

IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Marshall T. DePue et al.

Serial No.: 10/698,589

Filing Date: Oct. 31, 2003

Title: METHOD AND APPARATUS FOR ULTRA-HIGH SENSITIVITY OPTICAL DETECTION OF BIOLOGICAL AND CHEMICAL AGENTS



Examiner:

Group Art Unit:

COMMISSIONER FOR PATENTS  
PO Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

This Information Disclosure Statement is submitted:

- (X) under 37 CFR 1.97(b), or  
(Within three months of filing national application; or date of entry of national application; or before mailing date of first office action on the merits; whichever occurs last)
- ( ) under 37 CFR 1.97(c) together with either a:  
( ) Statement under 37 CFR 1.97(e), or  
( ) a \$180.00 Processing fee under 37 CFR 1.17(p), or  
(After the CFR 1.97 (b) time period, but before final action or notice of allowance, whichever occurs first)
- ( ) under 37 CFR 1.97 (d) together with a:  
( ) Statement under 37 CFR 1.97(e), and  
( ) a \$180.00 processing fee under 37 CFR 1.17(p).  
(Filed after final action or notice of allowance, whichever occurs first, but before payment of the issue fee)

Please charge to Deposit Account **50-1078** the sum of \$0.00. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account **50-1078** pursuant to 37 CFR 1.25.

( ) Applicant(s) submit herewith Form PTO 1449. References identified with an asterisk (\*) were disclosed in Patent Application No. \_\_\_\_\_ filed \_\_\_\_\_, now U. S. Patent No. \_\_\_\_\_, and, as such, copies thereof are not included pursuant to the provisions of 37 CFR 1.98(d).

( ) A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form 1449, as presently understood by the individuals(s) designated in 37 CFR 1.56 (c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on form PTO 1449 and is enclosed herewith.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450.

Date of Deposit: Jan. 28, 2004

Typed Name: Linda A. Iimura

Signature: Linda A. Iimura

Respectfully submitted,

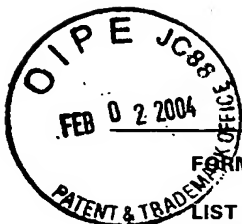
Marshall T. DePue et al.

By Juergen Krause-Polstorff

Juergen Krause-Polstorff

Attorney/Agent for Applicant(s)  
Reg. No. 41,127

Date: Jan. 28, 2004



## PATENT APPLICATION

Sheet 1 of 1

FORM PTO-1449

LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENT

(Use several sheets if necessary)

ATTY. DOCKET NO.

10030307-1

SERIAL NO.

10/698,589

APPLICANT

Marshall T. DePue et al.

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GROUP

## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	*	DOCUMENT NUMBER	DATE	NAME
		5,506,685	04/09/96	Francois Grasdepot
		4,297,035	10/27/81	Gary C. Bjorklund

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	NAME	TRANSLATION	
					YES	NO

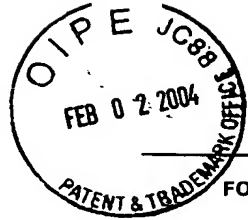
## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

	Haes, Amanda J. et al., "A Nanoscale Optical Biosensor: Sensitivity and Selectivity of an Approach Based on the Localized Surface Plasmon Resonance Spectroscopy of Triangular Silver Nanoparticles", J.Am.Chem.Soc, 2002, 124, pp. 10596-10604.
	Bjorklund, Gary C., "Frequency-Modulation Spectroscopy: A New Method for Measuring Weak Absorptions and Dispersions", Optics Letters, Vol. 5, No. 1, January 1980, pp. 15-17.
	Engelin, Richard et al., "Phase Shift Cavity Ring Down Absorption Spectroscopy", Chemical Physics Letters, 262, November 8, 1996, pp. 105-109.

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\* Copies of these references are not enclosed pursuant to 37 CFR 1.98(d). (See accompanying IDS)



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		DOCUMENT NUMBER	DATE	NAME	TRANSLATION	
					YES	NO

## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

		Pipino, Andrew C.R., "Evanescent Wave Cavity Ring-Down Spectroscopy with a Total-Internal-Reflection Minicavity", Rev.Sci.Instrum. Vol. 68, No. 8, August 1997, pp. 2978-2989.
		Armani, D.K., "Ultra-High-Q Toroid Microcavity on a Chip", Letters to Nature, Vol. 421, Feb. 2003, pp. 925-928.

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